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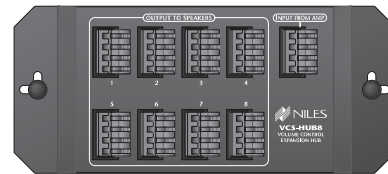
Niles Audio Corporation

www.nilesaudio.com

12331 S.W. 130 Street
Miami, Florida 33186
Tel: (305) 238-4373
Fax: (305) 238-0185

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INSTALLATION & OPERATION GUIDE



VCS HUB8

Volume Control Distribution Hub



NILES®

BLENDING HIGH FIDELITY AND ARCHITECTURE®

VCS HUB8

INTRODUCTION

The VCS HUB8 is a speaker distribution hub that mounts in a structured-wiring cabinet or on a wall. It connects between the speaker-level output of an amplifier or receiver and the Niles volume controls that adjust the sound level of your speakers.

A system with volume controls for multiple speaker pairs connected directly to an amplifier or receiver requires a large number of connecting wires. This creates an unsightly and often inconvenient installation, and increases the potential for connection errors.

The Niles VCS HUB8 eliminates such problems. Simply run a single set of wires from the amplifier or receiver to the distribution hub, and then connect each of the volume controls to the distribution hub.

With the VCS HUB8, you can distribute the output from your amplifier or receiver to the volume controls for up to eight pairs of stereo speakers.

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FEATURES AND BENEFITS

The VCS HUB8 offers a number of improvements over other speaker distribution hubs:

- Rustproof, weather-resistant housing of high-impact, injection-molded plastic.
- Removable connector blocks for convenient wire connections.
- Small size and compact footprint, designed specifically to fit into a standard structured-wiring cabinet.
- Snap-in “Christmas tree” plugs (supplied) for quick and easy installation in a structured-wiring cabinet.
- Also suitable for wall-mounting.
- Ideal for home and commercial sound installations.
- UL-rated to comply with all local building codes.
- 10 years parts and labor warranty.

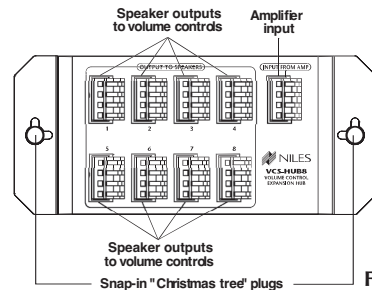


Figure 1

INSTALLATION CONSIDERATIONS

Calculating the Impedance Magnification Setting

To ensure optimal operation of your amplifier or receiver, your speakers must show it a load that it can handle safely and effectively. This requires the use of impedance-magnifying (IM) volume controls.

TECH TIP

Some speakers have selectable impedance. Before you proceed, please confirm that any selectable-impedance speakers in your system are properly set for the system you are installing.

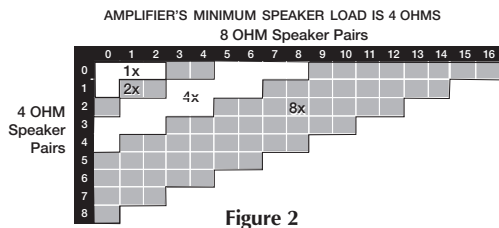


Figure 2

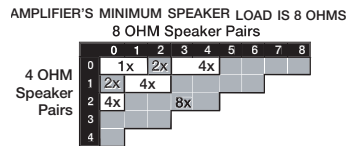


Figure 3

CAUTION! Every speaker pair in the system must be connected to an impedance-magnifying volume control and set to the same magnification.

When you install the VCS HUB8 and connect the volume controls to it, doublecheck the switches on the volume controls

to verify that they are set correctly for the impedance load of your speakers.

Use the following instructions and the accompanying charts to select the correct switch setting on the volume controls for the number and type of speakers in your system.

1. Count the number of pairs of 4-ohm speakers and the number of pairs of 8-ohm speakers you are connecting. *Count pairs of 6-ohm speakers as 4-ohm pairs.*
2. Determine whether the amplifier should see a 4-ohm load or an 8-ohm load. You should find this information in the owner's manual of the amplifier.
3. Read the correct switch position from the charts on the next page. See **Figure 2** if your amplifier can drive a 4-ohm load. See **Figure 3** if your amplifier must have an 8-ohm speaker load.
4. Set the switches on all of the controls to the same position (1x, 2x, 4x, or 8x).

Limitations in Volume with High Magnification Settings


Using an 8x setting limits the power to each speaker pair to one-eighth of the amplifier's output.


In a typical application of IM volume controls, a system has eight pairs of 8-ohm speakers throughout the house. Each pair of speakers is connected to an IM volume control with its switches set for 8x.

With eight pairs of speakers, one-eighth of the amplifier's power is available to any pair. Therefore, an amplifier rated at 100W per channel RMS into 8 ohms will deliver up to 12.5W to each of the eight pairs – whether you play all eight pairs or just one pair. This translates into a drop in the maximum volume capability of about 9dB at the 8x setting.

Type of Speaker Wire

We recommend 16-gauge stranded copper speaker wire for most connections, and 14-gauge wire for runs longer than 80 feet. Don't use speaker wire larger than 14 gauge, because larger wire may not fit into the connectors. Never use solid-core, aluminum, or Romex wire with an IM volume control. For speaker-wire runs within walls, most U.S. states and municipal-

12 AWG 

14 AWG 

TECH TIP

Wire size is expressed by its AWG (American Wire Gauge) number. The lower the AWG number, the larger the wire. Thus, 12 AWG wire is physically larger than 14 AWG.

ities require a special type of speaker wire with a specific CL fire rating, such as CL-2 or CL-3. Consult your Niles dealer, building contractor, or local building-inspection department if you aren't sure what kind of wire is best for your application.

Mounting Location

The VCS HUB8 is designed specifically to fit into a structured-wiring cabinet, with snap-in "Christmas tree" plugs for convenient installation.

Alternatively, you can mount it on a wall, a basement floor joist, or some other unobtrusive location.

INSTALLATION

1. Run all necessary wiring to the VCS HUB8. Label the wires for future reference.
2. Secure the VCS HUB8 in a suitable location. In a structured-wiring cabinet, use the convenient snap-in "Christmas Tree" plugs (supplied) to mount it in the cabinet frame. On a wall or other flat surface, remove the snap-in plugs, insert drywall screws (not supplied) through the resulting holes, and secure

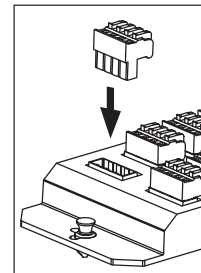


Figure 4

the screws to the mounting surface. TAKE CARE NOT TO OVERTIGHTEN THE SCREWS, WHICH COULD DAMAGE THE HOUSING.

3. Locate the connector plugs (and remove them if they are plugged in).
4. Strip 1/4" of insulation from the end of each wire. Tightly twist the end of each wire until no frayed ends remain.
5. Use a small flathead screwdriver or your thumbnail to raise the locking tabs, exposing the holes on the removable connector plug.
6. Insert each wire into the appropriate hole on the removable connector plug, and snap the locking tab down.

NOTE: *Maintain proper phasing. Connect the positive terminals on the VCS HUB8 to the positive terminals on the amplifier or receiver, and on the volume controls. Connect the negative terminals on the VCS HUB8 to the negative terminals on the amplifier or receiver, and on the volume controls. To help you avoid improper phasing, the connector plug is keyed. Insert the smooth side of the connector plug into the smooth side of the socket. Don't force the scalloped side of the connector plug into the smooth side of the socket.*

7. Plug the connectors into the VCS HUB8 as shown. See **Figure 4**. The single connector plug at lower right is the input from the amplifier or receiver. The other connector plugs are the outputs, each leading to a specific volume control.

SPECIFICATIONS

Mounting

In a structured-wiring cabinet, using convenient snap-in "Christmas tree" plugs (supplied)

On a wall or other flat surface, secured with drywall screws (not supplied)

Wiring Requirements

14-18 gauge, two individual runs of two-conductor speaker wire, or one run of four-conductor speaker wire.

Unit Dimensions

6.85" wide x 3" high x 1.3" deep

CONTENTS

VCS HUB8

- VCS HUB8
- Snap-in "Christmas Tree" plugs X2
- Removable speaker connector X9